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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,055	01/28/2004	Tetsuya Gotoh	248025US2CONT	2329

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EXAMINER

WASHINGTON, JAMARES

ART UNIT	PAPER NUMBER
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2625

NOTIFICATION DATE	DELIVERY MODE
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08/14/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/765,055	Applicant(s) GOTOH ET AL.	
	Examiner JAMARES WASHINGTON	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8, 9 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 9 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Amendment

Amendments and response received May 4, 2009 have been entered. Claims 1-6, 8-9 and 11-14 are currently pending in this application. Claims 2 and 4-6 have been amended. Claims 13 and 14 have been newly added by this amendment. Amendments and response are addressed hereinbelow.

Claim Rejections - 35 USC § 101

In light of the amendments to the claims, Examiner withdraws previous grounds of rejection regarding the claimed inventive concept being directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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2. Claims 2, 5, 13 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Abraham J. Streefkerk (US 6058277).

Regarding claim 2, Streefkerk et al discloses a printing job controlling device configured to display a queue of printing jobs (Fig. 1 numeral 107) to be printed on printing machines (Fig. 4 numeral 407 "Available printers"), comprising:

a calculating unit configured to calculate a time required to process each of the printing jobs (see rejection of claim 1); and

a displaying unit (Fig. 2 numeral 201) configured to display a list of identifiers of the printing machines in a column in a window (Fig. 4 numeral 407 displays the available printers in a column to be selected all within the "available printers" window) and to simultaneously display, for each of the identifiers, an image of a current printing job having a size proportional to the time calculated by said calculating unit continuously on a predetermined displaying area at a fixed location adjacent to an identifier of a corresponding printing machine at one end of the displaying area (Fig. 8; Continuously updated as described for Fig. 7 at Col. 6 lines 3-5. The pie-shaped diagram shown in Fig. 4 (bottom right) is at a fixed location of the display area, therefore the current print job (408) is at a fixed location within the pie-shaped diagram; wherein Fig. 4 shows the current job immediately to the right (410) of the available printer selected. Col. 6 lines 41-47 wherein 3 pie charts can be shown directly next to the 3 printers listed).

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Regarding claim 5, Streefkerk et al discloses a method of displaying a queue of print jobs to be printed on printing machines including a printing job controller (see method performed by the device as rejected in claim 2 above), the method comprising:

calculating a time required to process a print job using the printing job controller (see rejection of claim 2);

simultaneously displaying on a display unit of a printing machine a list of identifiers of the printing machines in a column in a window (see rejection of claim 2);

continuously and simultaneously displaying an image of a current print job having a size proportional to the time required at a fixed location adjacent to an identifier of a corresponding printing machine on one end of a displaying area (see rejection of claim 2).

Regarding claim 13, Streefkerk et al discloses the printing job controlling device according to claim 2, wherein the displaying unit is further configured to display an icon representing a current status of a respective printing machine adjacent to an identifier for the respective printing machine (see rejection of claim 2 wherein the “pie-chart” representing the current status of the printers are adjacent the printer names/identifiers).

Regarding claim 14, Streefkerk et al discloses the method of displaying a queue of print jobs according to claim 5, further comprising:

displaying an icon representing a current status (see rejection of claim 2, pie-chart) of a respective printing machine adjacent to an identifier for the respective printing machine (see

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rejection of claim 13 wherein the charts are located adjacent their respective printer names/identifiers).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 6, 8, 9, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abraham J. Streefkerk et al (US 6058277) in view of Sidney L. Smith et al (Guidelines for designing user interface software).

Regarding claim 1, Streefkerk et al discloses a printing job controlling device (Fig. 1 numeral 107) configured to display a queue of printing jobs (Fig. 8 described at Col. 6 lines 24-29), comprising:

a calculating unit (Fig. 2 numeral 202) configured to calculate a time required to process a printing job (Col. 5 lines 1-4);

a reading unit (Fig. 2 numeral 202) configured to read out a current status of the printing job (Col. 4 lines 62-66 wherein the waiting time would indicate how long the print job would currently have to wait before being processed); and

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a displaying unit (Fig. 2 numeral 201) configured to display an image having a size proportional to the time required calculated by said calculating unit (Col. 6 lines 1-11; Col. 5 lines 8-15 wherein the size of the circle segment changes according to the status read out by the reading unit (e.g., time remaining before current print job is complete).

Streefkerk et al fails to disclose the above image having a size proportional to the time required to process the print job, filled with a repeating pixel pattern that changes according to the current status read out by said reading unit.

Smith et al, in the same field of endeavor of User Interface Data Display (Guidelines for Designing User Interface Software, Section 2.4; wherein graphics are considered rather than text description or tabulation, for display of data showing relations in space or time), teaches an image filled with a repeating pixel pattern that changes according to the current status (Section 2.4.4, wherein the pattern within an [image], e.g., bar graph as recited in the “comment” section, may serve a diagnostic function beyond the comparison of individual [images], e.g. bars. If multiple [images] show data from different components of a complex system, then users may learn characteristic “profiles” (patterns) of the [images] which indicate “system status”).

Combining the teachings of Smith et al with the “pie-shaped” diagrams as disclosed by Streefkerk et al, one of ordinary skill in the art would have recognized that utilizing a certain “color” or “pattern” within each slice would have afforded a means to alert the user to another aspect of the print jobs; that being the diagnostic status. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the image having a size proportional to the time required to process a print job as disclosed by Streefkerk et al to utilize the teachings of Smith et al wherein a color or pattern within a graphical image gives a

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diagnostic status of the object which the image represents, to add additional value to the graphical representation of the user interface to speed information assimilation by a user. One could easily scan the image displayed on the user interface and make determinations accordingly.

Regarding claim 3, Streefkerk et al discloses a printing job controlling device configured to display a queue of printing jobs (see rejection of claim 1), comprising:

a calculating unit configured to calculate a time required to process each of the printing jobs (see rejection of claim 1); and

a displaying unit configured to simultaneously display images in a window (see rejection of claim 1 above), each image having a size proportional to the time required calculated by said calculating unit continuously on a predetermined displaying area (see rejection of claim 2 above).

Streefkerk et al fails to disclose wherein the images are rectangular images, adjacent to each other with gaps between adjacent images, forming a combined substantially rectangular image having a size proportional to a sum of calculated times required to process each of the printing jobs.

Smith et al, in the same field of endeavor, teaches choosing rectangular images adjacent to each other with gaps between adjacent images (Section 2.4.4 wherein the usage of bar graphs (rectangular images) are considered when comparing a single measure across a set of several entities. Section 2.4.4/3 teaches bar length representing time duration should be plotted horizontally. Finally, section 2.4.4/4 teaches one to space the bars closely enough that a direct

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visual comparison can be made without eye movement and to typically adjust spacing between bars to be less than the bar “width”).

Simple substitution of the “bar graph” approach to displaying information as taught by Smith et al for the “pie-chart” approach as disclosed by Streefkerk et al would have led one of ordinary skill in the art at the time of the invention to the predicted results of displaying the time duration of processing as shown in the pie-chart of Streefkerk et al, in a bar graph as taught by Smith et al. Both methods of display were well known in the art at the time of the invention and utilizing the “bar graph” approach gives the added advantage of providing direct visual comparison of quantities when attempting to show a comparative illustration of a single measure across separate entities, thus providing effective assimilation of comparative data by users (Smith et al). Therefore, it would have been well within the reasoning ability of one of ordinary skill in the art at the time the invention was made to modify the disclosure of Streefkerk et al with the bar graph representation as taught by Smith et al to improve the disclosed device by given the advantages in the manner as mentioned above. Situating the bar graphs in the adjacent manner as rejected above would have provided the predictable result of forming a combined rectangular image having a size proportional to a sum of calculated times required to process the printing jobs. Furthermore, Smith et al teaches (Section 2.4.4/3) that “if bar length is used to represent time duration, then it might be more appropriate to orient the bars horizontally” which would obviously give the total summed time for all plotted bars by the horizontal length as a whole.

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Regarding claim 6, Streefkerk et al discloses a method of displaying a queue of print jobs on a printing machine including a printing job controller (Fig. 4 is the display on the printing machine), the method comprising:

calculating times required to process the print jobs using the printing job controller (see rejection of claim 3 above);

continuously and simultaneously displaying, on a display of the printing machine, rectangular images in a window, each having a size proportional to the calculated time required (see rejection of claim 3 above); and

arranging on the display the continuously and simultaneously displayed rectangular images adjacent to each other with gaps between adjacent rectangular images in the window, forming a combined substantially rectangular image having a size proportional to a sum of calculated times required to process each of the print jobs (see rejection of claim 3).

Regarding claim 8, Streefkerk et al discloses the printing job controlling device according to claim 3, wherein the displaying unit is further configured to display the combined rectangular image (see rejection of claim 3), wherein the area of the combined rectangular image is approximately equal to a sum of areas of the rectangular images (It is common sense to one of ordinary skill in the art that the area of combined graphical images would equal or be a close approximation of the individual areas of the images used to make up the combined image. Streefkerk shows in Fig. 8 that the combined pie-shaped images are equal to each individual pie-shaped image summed. Applying this principle to the rectangular images rejected in claim 3 would yield predictable results of aligning the rectangular images lengthwise, one in front of the

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other to get a total time for processing all jobs in the queue. This scenario would be obvious to one of ordinary skill in the art to try, choosing from a finite number of identified, predictable solutions of positioning the graphical images).

Regarding claim 9, Streefkerk et al discloses the printing job controlling device according to claim 8, wherein the displaying unit is further configured to display the combined rectangular image with a horizontal dimension larger than a vertical dimension (see rejection of claim 3) wherein it would be obvious for one of ordinary skill in the art to try the claimed subject matter wherein the rectangular images are situated lengthwise to easily indicate the amount of time needed to process/print the entire print queue. This would cause the horizontal dimension of rectangular images, placed lengthwise, to be larger than the vertical dimensions of each individual rectangular image).

Regarding claim 11, Streefkerk et al discloses the method according to claim 10, wherein the area of the combined rectangular image is approximately equal to a sum of areas of the rectangular images (see rejection of claim 8).

Regarding claim 12, Streefkerk et al discloses the method according to claim 11, wherein the combined rectangular image has a horizontal dimension larger than a vertical dimension (see rejection of claim 9).

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5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Streefkerk et al in view of Smith et al, and further in view of Akihiro Suzuki et al (US 6606163 B1).

Regarding claim 4, Streefkerk et al discloses a method of displaying a queue of print jobs of a printing device including a printing job controller and a display unit, the method comprising:

calculating a time required to process a print job using the printing job controller (see rejection of claim 1 above);

reading out a current status of the print job using the printing job controller (see rejection of claim 1);

displaying an image having a size proportional to the time required and filled with a repeating pixel pattern on the display unit of the printing device (see rejection of claim 6 wherein the display is on the printing device).

Streefkerk et al fails to explicitly disclose changing the repeating pixel pattern according to the current status.

Suzuki et al, in the same field of endeavor of print job scheduling (Abstract), teaches changing the repeating pixel pattern according to the current status (Fig. 17 wherein the patterns represent status of each print job, which the patterns will change according to the present status of the print job).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the method as disclose by Streefkerk et al wherein an image is displayed having a size proportional to the time required and filled with a repeating pixel pattern to utilize the teachings of Suzuki et al wherein the repeating pixel pattern changes according to the current

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status of the print job to aid in speeding data assimilation by a user and eliminating the use of textual descriptions.

Response to Arguments

6. Applicant's arguments with respect to claims 2, 3, 5 and 6 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's arguments filed May 4, 2009 have been fully considered but they are not persuasive.

Applicant's remarks: The outstanding Office Action relies on the section underlined above, stating that "the overall pattern of a bar graph may serve a diagnostic function beyond the comparison of individual bars. For example, if multiple bars show data from different components of a complex system, then users may learn characteristic 'profiles' of the bars which indicate system status."

It appears that the outstanding Office Action is misinterpreting "overall pattern of a bar graph" as a repeating pixel pattern that changes according to the current status filling the bar graph. The cited "pattern of a bar graph" is not a fill pattern, but rather is the combination of adjacent bar graphs next to each other forming a profile.

Further, Applicants respectfully submit that the common definition of "profile" includes "a representation of something in outline," or "an outline seen or represented in sharp release,"

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such as a contour. Thus, Applicants respectfully submit that the Smith document describes a pattern formed from a combination of adjacent bar graphs forming an outline or a profile which conveys some meaning. However, the Smith document is silent regarding a pattern filling a bar graph, much less a repeating pixel pattern that changes according to the current status.

Examiner's response: As recited in the rejection of claim 1 above, one of ordinary skill in the art would have recognized that utilizing a certain "color" or "pattern" within each slice would have afforded a means to alert the user to another aspect of the print jobs; that being the diagnostic status. The combination of the pixels which fill the pie-chart as disclosed by Streefkerk et al with the profiles created by the lengths of the bars as explained by Smith would have simply given one of ordinary skill in the art a visual "bar-graph" description of the pixel patterns filling the pie chart of Streefkerk et al. The pixel patterns would simply give "a diagnostic status of the object which the image represents" (i.e., print jobs which are being processed). Furthermore, in response to applicant's arguments against Smith et al individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In addition, the claims do not call for multiple bars being shown with multiple pixel patterns. Smith et al, as the claim reads, reads on "an image having a size...and filled with a repeating pixel pattern that changes according to the current status" as the profile image of the bar graph changes according to diagnostic status. Whether the bar is filled with black, red or white pixels, the amount of pixels filling the bar changes according to diagnostic readings.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMARES WASHINGTON whose telephone number is (571) 270-1585. The examiner can normally be reached on Monday thru Friday: 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on (571) 272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/King Y. Poon/
Supervisory Patent Examiner, Art Unit 2625

/Jamares Washington/
Examiner, Art Unit 2625

/J. W./
Examiner, Art Unit 2625

August 7, 2009